MAT 1996 Relevance Checker

- Red: Question not relevant for current syllabus.
- Orange: Question not entirely relevant for current syllabus but worth attempting. See comments.
- Black: Question relevant for current syllabus.

1. Multiple Choice

(a). Quadratic Function

This question is relevant for the current syllabus.

(b). Exponential Versus Quadratic

This question is relevant for the current syllabus.

(c). Simultaneous Equations

This question is relevant for the current syllabus.

(d). Trigonometric Equation

This question requires the double angle formula $\sin(2x) \equiv 2\sin(x)\cos(x)$, which you are not expected to know for the current syllabus. However, if you assume this result, then the rest of the question is relevant and indeed there's quite a lot to learn from solving this one. Also note that the question uses radians, whereas papers set according to the current syllabus are set in degrees.

(e). Modulus Inequalities

This question is not relevant for the current syllabus, because it involves the modulus function. However, if you *have* studied the modulus function, then it provides useful practice working with two inequalities which we want to hold simultaneously. They could just about set this on a modern paper if they also gave you the definition of the modulus function: $|x| = x$ is $x \geq 0$ and $-x$ otherwise.

(f). Graph Transformations

This question is relevant for the current syllabus.

(g). Large n Limit

This question is relevant for the current syllabus.

(h). Complicated Derivative

This question makes use of the chain rule as well as trigonometric differentiation, and so is not relevant for the current syllabus.

(j). Fundamental Theorem of Calculus

This question is relevant for the current syllabus.

(k). Exactly One King

This question is relevant for the current syllabus.

2. Solutions of Polynomials

The entirety of this question is relevant for the current syllabus.

3. Straight Lines

The entirety of this question is relevant for the current syllabus.

4. Integrals and Areas

The entirety of this question is relevant for the current syllabus.

5. Noughts and Crosses

The entirety of this question is relevant for the current syllabus.